

MARSHALL STAR

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Marshall Space Flight Center

September 24, 1997

Marshall Microgravity Experiments Set for Flight to Mir

by Bob Thompson

Four microgravity science experiments, managed by the Microgravity Research Program Office at Marshall Center, are scheduled for launch Thursday aboard the Space Shuttle Atlantis on mission STS-86, to the Russian space station Mir.

The microgravity experiments aboard Atlantis include the test of a new protein crystal growth measurement tool; a cell tissue growth experiment; a fluid physics mixing experiment; and two Canadian experiments, one growing protein crystals and one melting and mixing metals.

The interferometer experiment, flying in space for the first time, will study and record the protein crystal growth process. This process may further the development of new, diseasefighting drugs.

The interferometer, an instrument for measuring wavelengths of light, collects and stores optical information on a growing crystal in the facility, showing the crystal's new form, as well as the changes in the concentration of the protein solution surrounding the crystal.

The experiment is conducted in the Microgravity Glovebox facility and contains six experiment sample sets. Each sample uses the same protein — lysozyme, found in egg whites — but is mixed differently.

The experiment hardware will be brought back from Mir on the STS-89 mission, scheduled for January 1998.

The principal investigator is Dr. Alexander McPherson of the University of California, Riverside. Co-investigators William Witherow and Marc Pusey are both from Marshall Center.

Scientists will use the Biochemistry of Three-dimensional Tissue Engineering experiment to assess the impact of long-

duration microgravity on the stability of cells, changes in genes, changes in replicating cells and changes in cell shape.

Researchers also will test a new cell culture incubator, biotechnology refrigerator and a cell sample transfer system.

This tissue experiment will not only be important for designing successful tissue culture experiments for the future International Space Station, but is expected to contribute to our fundamental understanding of the long-term effects of low-gravity conditions on the human body.

Investigators include Peter Lelkes of the University of Wisconsin Medical School in Milwaukee, studying pain suppression molecules; Dr. Timothy Hammond of Tulane

Littles to Receive Leadership Award from American University



The American University's School of Public Affairs in Washington, D. C., will present the 1997 Roger W. Jones Award for Excellence in Leadership to Marshall Center Director Dr. Wayne Littles. The presentation will be made at 8 p.m. Sept. 29 in the university's Kay Spiritual Life Center.

Littles, one of two award winners, will give brief remarks on "The Government

Performance and Results Act: Implications for Agency

Management."

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Habitat Founder to Speak at CFC Kickoff Monday

The Marshall Center will kick off this year's Combined Federal Campaign (CFC) with featured speaker Millard Fuller, founder and president of Habitat for Humanity International. The event will begin at 9 a.m. Monday, Sept. 29, in Morris Auditorium in Building 4200. The theme for this year's campaign is "Hope is in Our Hands."

Fuller, who founded Habitat with his wife Linda in 1976, travels and speaks worldwide and has received international recognition for his work in advocating decent, affordable housing for all. The organization is cited as an important leader

in the battle against poverty housing in the U.S. and abroad.

Fuller has written six books about Habitat for Humanity. A Simple, Decent Place To Live (1995) chronicles the entire story of the effort and organization. The Theology of the Hammer (1994) explains the concept that true religion mandates that we put our faith and love into action. Fuller's other books are The Excitement is Building, co-authored with his wife Linda, No More Shacks!, Love in the Mortar Joints and Bokotola.

In September 1996, President Clinton continued on page 4

Von Braun
Exploration Forum
presents
"Chroniclers of Exploration"
7 p.m.
Oct. 10, 1997
Von Braun Center
in Huntsville

Tickets for the reception at 6 p.m., and the Von Braun Memorial Dinner and Dance that will follow the Forum may be purchased through Oct. 1 by calling 890-6811

Progress Made on Integrated Financial System FMO Nearly Completes

TASA has selected KPMG Peat Marwick LLP, Washington, D.C. to implement an agency-wide Integrated Financial Management (IFM) System, an effort in which Marshall will be leading the way.

This new system will allow NASA to employ standardized financial procedures NASA-wide for improved mission management support. It will also comply with federal regulations and policies for financial systems. In addition, the system will support the implementation of fullcost accounting throughout the agency.

The new financial management system covers seven primary areas: core financial, budget, executive information system, travel, time and attendance, procurement, and asset management. Under the contract, KPMG will provide all hardware and computer off-the-shelf software required for the IFM System as well as associated implementation and sustaining support services.

Marshall's Chief Financial Officer

Dave Bates said, "As the first center to utilize the IFM System, we have already begun reengineering of business processes and standardization efforts." The new systems, he said, "are going to impact every person on this center and that impact will be on a positive note." In the next few months, a variety of efforts will be used to make all personnel aware of how the new systems will affect their day-today way of doing business.

Valued at \$186.3 million, the contract with KMPG Peat Marwick includes fixedprice options for the budget, procurement, travel, and time and attendance components and the sustaining support services, a level of effort ceiling, and a ceiling for indefinite quantity training classes. An unpriced option for Asset Management is also included.

Marshall will begin deployment of the IFM System, starting on Oct. 1, 1998. Completion by all centers is expected by July 1, 1999. The contract itself will be continued on page 5

Effects of Space Environment on Mir to Be Measured by New Marshall-Managed Device



NASA astronaut Mark Lee tests an early prototype of the Space Portable Spectroreflectometer instrument, the first instrument of its kind, at the underwater Neutral Buoyancy Simulator facility. The instrument will be flown to the Mir Space Station aboard the STS-86 mission. Photo by Terry Leibold

by Joy Carter

device to monitor the health of the future International Space Station will soon be on its way to the Russian space station Mir for testing.

The Space Portable Spectroreflectometer, a device for measuring the effects of the space environment on spacecraft materials, is scheduled to fly aboard the Space Shuttle Atlantis on the STS-86 mission. Launch is targeted for late launch Thursday night.

The device is designed to test spacecraft materials such as those used to construct the International Space Station. NASA and its international partners are scheduled to begin on-orbit assembly of the Space Station in mid- to late-1998.

"The Spectroreflectometer is the first hand-held, battery-powered device of its kind," said principal investigator Ralph Carruth of the Marshall Center. "It will

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Payroll Consolidation

The Marshall Center Financial . Management Office has taken another major step toward completing the agency's current payroll consolidation initiative.

Marshall assumed responsibility as paymaster for three centers in May — Dryden, Kennedy, and Headquarters. Stennis Space Center was added in August. This pay period marks the Center's progression to another stage of the consolidation with three additional centers —Johnson Space Center, Ames Research Center, and Lewis Research Center — having been successfully added.

The latest step began on Sept. 12, with the first full pay period of expanded operations ending this week. That brings the number of centers being supported through consolidated payroll operations to eight. The final two — Langley and Goddard — are scheduled for conversion in late November.

With the latest increment, Marshall's payroll specialists are responsible for well over 21,000 employees, and for a gross payroll of over \$40 million.

John Alexander, Chief of NASA Payroll and Marshall's Personal Services Office, said the project's success to date is attributable to the expertise and commitment of staff at all centers, but the technical support staff at Marshall has been the key to success. He also cited the support of the Human Resources, Information (computer) Systems, and technical support contractors.

Although NASA has a core system for payroll and personnel processing, Alexander said, there are many unique management reporting requirements at each center, and meeting these needs has been a major challenge of the

"Ensuring that everyone receives their salary on time and in the correct amount is the first priority," Alexander

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Officials of the Environmental Protection Agency tour Marshall's Surface Treatment Facility in Building 4760 during a visit to observe environmentally friendly paint stripping technologies. These technologies are being evaluated as potential alternatives for use of methylene chloride. That substance will be restricted beginning in September 1998.

Photo by Emmett Given

Shelby to Speak at Joint Society Meeting

U.S. Senator Richard Shelby will discuss "The Future of Defense and Space Programs in Alabama" during a joint meeting with the AIAA, IEEE, HATS and UAH. The meeting, to be held on Sept. 29 at the Holiday Inn Research Park, will begin with registration at 6:15 a.m., followed by breakfast at 6:30 and the program at 7 a.m.

William Craig, director of the U.S. Army AMCOM Software Engineering Directorate, will also discuss "Future Plans for U.S. AMCOM SED Software Engineering."

The cost is \$13 each. Reservations should be made by Sept. 25 by calling the HATS office at 837-4287. Checks should be made payable to HATS/Joint Societies meeting.

Marshall Annual Picnic Set for Oct. 4, Volunteers Still Needed

by Carole McLemore, Picnic Publicity

Why would any one miss out on a day of fun, food, festivities, football games, and chances to win great door



prizes? Add to that, if you buy your meal tickets before Sept. 26, you will be eligible for a special door prize to be given away during the Early Bird drawing at 12:30 on the Main Stage. This year we've made it even easier for you to purchase your meal tickets by selling them at the

4203 and 4610 cafeterias during the lunch hour. Or, you can still purchase meal tickets for pork and chicken BBQ plates at \$5.00 each from your Administrative officers.

Don't forget to stop by the Sports Pavilion during the day to check out the scores of your favorite College teams, grab a bag of hot roasted peanuts from Mr. Peanut or sip on your favorite cold beverage . While you are there remember to drop a few tickets in for the special drawings for autographed sports memorabilia that will be on display in the pavilion. You might be surprised at whose autograph you'll see!

Volunteers Still Needed

Thanks to all of the people who have already volunteered to assist with the picnic, but a few more volunteers are still needed. Donate just one hour of your time during the picnic and you'll be eligible to win a \$50 gift certificate, held exclusively for volunteers! To signup and give an hour of your time, contact one of the individuals listed below:

Event	Contact	Number
Bingo	Rusty Cowan	544-7134
	Nikki Miller	544-8955
Tickets	Annie Johnson	544-2068
	Paula Carden	544-4429
Soft Drinks	Carol Lovell	544-0590
Beer	Doug Hill	544-0177
Games/Contests	Leslie Houston	544-8832
Ice	Kevin Crawford	544-3664

Planes, Teams, and Automobiles

If you have a car or plane that you would like to exhibit, it's not too late to register for the picnic. Exhibitors receive a plaque and picture for participating in the "Cruisin' with the Dream" show. Please contact Paul Bookout at 544-1490 to register your

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New Marshall-Managed Device

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allow astronauts to monitor and assess the condition of actual spacecraft surfaces, rather than relying on information gathered from samples of previous experiments."

During a spacewalk planned for later this year, Russian cosmonauts and U.S. astronauts will use the device to measure how much energy can be absorbed by the thermal control coatings, or radiator surfaces, of the Mir space station.

"Radiators, where excess heat is dumped from the space station, are a vital part of the spacecraft's cooling system," said Jim Zwiener, co-investigator for the Space Portable Spectroreflectometer at Marshall. "If the radiators degrade, the cooling system degrades, so these are critical surfaces."

Measurements will be used to determine the deterioration of radiator surfaces caused by the space environment. "Also, in the vacuum of space, gases generated by — and released from — the spacecraft collect on the spacecraft's surfaces, resulting in contamination," said Zwiener. The gas deposits are visible as a discoloration of the spacecraft's white paint surfaces.

Measurements will be taken from four sites — three on the core module and one on a smaller adjacent module. To take measurements, the device will be held against the spacecraft's surface for approximately two minutes. "During tests, light consisting of wavelengths from near ultraviolet to infrared will be emitted by sources within the device," explained Carruth. "The device measures then how much of this light is reflected, which also indicates how much is absorbed and the extent of deterioration."

The device will display the measurements on a small screen, and the astronauts will read the information to researchers on the ground.

"Comparisons of findings from this study with computer models will allow researchers to better predict and plan for the health of the Space Station." — Ralph Carruth

The radiator surfaces of Mir are very similar to those being manufactured for the International Space Station. Based on ground testing, researchers have constructed models of expected surface deterioration for the Space Station.

The experiment will also test the design of the measuring device.

"Plans are to not only use the device to monitor the effects of the space environment on the surfaces of the International Space Station," said Carruth. "But it may also be used to monitor other spacecraft, such as the Hubble Space Telescope."

NASA's Space Environments and Effects Program at Marshall will also use information gathered from the experiment to enhance the development of advanced technologies in the area of space environments for future NASA missions.

The Space Portable Spectroreflectometer was built by AZ Technology, Inc., in Huntsville and is managed by Marshall's Flight Projects Office.

Marshall to Celebrate Hispanic Month with Luncheon Thursday

The Marshall Center will celebrate National Hispanic Month with a lunch festival on Thursday from 11 a.m. to 12:30 p.m. in the courtyard of Building 4200. Music will be provided by the group Latin Rhythms and a Mexican plate lunch may be purchased from Charlie's grill in the basement of Building 4200.

National Hispanic Month is observed from Sept. 15 to Oct. 15.

Combined Federal Campaign

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awarded Fuller the Presidential Medal of Freedom, the nation's highest civilian honor.

During the kickoff, Marshall Center Deputy Director Carolyn Griner will also speak and the Huntsville Childcare Center, Inc. preschool will sing.

Marshall Center employees have always demonstrated care, concern and commitment to helping others in need, according to Steve Gaddis, this year's CFC executive chairperson.

"Our vision for the campaign is to help more people this year than ever before," said Gaddis. "Last year Marshall contributed over 33 percent of the \$1,353,000 collected for the entire Tennessee Valley campaign. Our monetary goal for this year is \$435,000."

The CFC is the annual government fund-raising drive combining international, national and local nonprofit organizations. Marshall's campaign will run through Nov. 7.

Meanwhile, representatives from Combined Federal Campaign (CFC) recipient organizations will give special presentations to Marshall employees in an effort to show how the CFC recipient organizations operate and how CFC dollars are spent.

The Speaker Series, which started Sept. 22 and will run until Oct. 2, will feature representatives from 11 different agencies speaking at various times and locations around the Center.

The schedule for the remaining presentations is:

Sept. 24 — Harris Home, 2 p.m., Building 4200, Room 211. Contact Billy Swinford, 4-0087

Sept. 25 — Big Brothers/Big Sisters, 2 p.m., Building 4202,

Room 212. Contact Gray Marsee, 4-0016.

Sept. 29 — Coalition for At Risk Minority Males, 2 p.m., Building 4487, Room A219S. Contact Steve Newton, 4-9010.

Sept. 30 — Boys and Girls Club, 10 a.m., Building 4666, Room 371H. Contact Stephanie Crutcher, 4-8774. Also, Second Mile Development, 2 p.m., Building 4202, Room 406. Contact Deemer Self, 4-0844.

Oct. 1 — Senior Center, 10 a.m., Building 4203, Room 6002. Dena Yell, 4-4655. Also, Downtown Rescure Mission, 2 p.m. Building 4201, Room 319. Contact Tina Smith, 4-7834.

Oct. 2 — Alzheimers Association, 10 a.m., Building 4203, Room 5002. Contact Lisa Martin, 4-4374. Also, Volunteer Center-Morgan County, 2 p.m., Building, 4201, Room 118. Contact Betty McCown, 4-0263.

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Microgravity Payloads

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University in Troy, N.Y., studying kidney disease; Thomas Goodwin and Neal Pellis of NASA's Johnson Space Center in Houston, Texas studying leukemia cells.

The Binary Colloidal Alloy Tests are fluid physics investigations. In this two-part experiment, researchers are investigating the mixing relationship between gases and liquids in an effort to produce new advanced computer chip materials. The experiments are conducted in space to overcome the earthbound gravity effects of settling, which interrupt thorough mixing. Aboard Mir, they will be allowed to be processed for approximately 50 days without the disturbing effects of gravity.

The Canadian Protein Crystallization Experiment is provided by the Canadian Space Agency and scientists from seven cities across Canada. This biotechnology flight experiment could lead to advanced treatment and possible cures for certain debilitating diseases as well as bacterial and viral infections. Findings from the experiment could enhance treatment of cancer, meningitis, cystic fibrosis, emphysema, diabetes, Alzheimer's and hypertension.

The experiment consists of 700 wells or small test tubes, which will be processed over a period of several months aboard Mir. The majority of the wells contain 32 different protein samples from 15 Canadian universities and research institutions, including 44 wells with student experiments.

The Queen's University Experiment in Liquid Diffusion, sponsored by the Canadian Space Agency, will investigate the mixing of potential semiconductor materials. This experiment, which involves melting different alloys in a self-contained furnace, may lead to new processes and materials for making faster and better computer circuitry.

Coordination and integration of the Canadian experiments with the Shuttle/Mir Flight Program is managed by NASA's Microgravity Research Program at Marshall Center.

Agency-Wide Finance Contract

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managed by NASA's Goddard Space Flight Center, Greenbelt, Md.

Bates encouraged all employees to make use of the IFMP home page to see what is involved and how to get started with NASA's new way of doing business. That Web site is accessible at http://www.msfc.nasa.gov/IFMP.

Obituaries

Margaret Mitchell, 71, Huntsville, died Sept. 8. She retired from Marshall in 1965 where she worked as a clerk typist. Houston Moore, 76, Toney, died Sept. 8. He retired from Marshall in 1974 where he worked as a supply clerk. He is survived by his spouse Dorothy Moore.

Big Spring Jam Tickets Available

Three-day, discount tickets for Huntsville's Big Spring Jam are available at the Marshall Center Exchange for \$15. Admission at the gate will be \$10 a day or \$20 for a weekend pass. The Sept. 26-28 festival will celebrate the South's musical and artistic heritage and will include jazz, pop, country, rock, blues, classical, zydeco, bluegrass and gospel music.

Acts this year include Kool & the Gang featuring J.T. Taylor, The Neville Brothers, Little Texas, Trisha Yearwood, Mark Lindsay, Blood Sweat & Tears and dozens more.

Littles to Receive Award

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The Jones Award, a bronze plaque and citation, is named for the late Roger W. Jones, a government executive who served in many key positions during seven White House adminstrations. Posts he held included the Munitions Assignment Board during World War II, the Civil Service Commission, the State Department, and the Office of Management and Budget.

The Jones Award for Executive Leadership is presented annually to honor federal career executives who have exhibited superior leadership in organizational achievements and in the development of managers and executives for continuity in government.

Marshall Annual Picnic

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car or Paul Johnson at 544-3793 to register your aircraft.

Both the softball and volleyball events need more teams in order to hold the tournaments, so please get your team registered before the Sept. 19 deadline by calling Rhonda Pepper at 544-5432 (softball) or Dana Tipton 544-7879 or Ketela White at 544-7179 (volleyball).

Next Week

Look in next week's Marshall Star for the entertainment announcement, door prize lists, and other interesting information about the picnic. As always, check out our web site at: http://pscinfo.pscni.nasa.gov:80/msfcpicnic/home.html.

Payroll Consolidation

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noted, "but there are many reporting needs beyond this." For instance, he pointed to managers' needs for project staffing costs, workforce levels, and other reports.

"The combined operations and technical team has done an outstanding job in finding ways to meet these unique needs while improving the cost effectiveness of NASA business operations," said Alexander.

Employee Ads

Miscellaneous

- ★ Clayton Marcus loveseat, gold fabric \$50; rug 9 x 12', wool, gold \$150. 883-8186
- ★ DP treadmill, Ergo Trak IV, \$100; Longaberger Christmas holiday cheer, divided protector, w/lid \$95. 837-0085
- ★ Acoustic guitar with case. Seagull make with Baggs deluxe transducer, \$650. 837-7209
- ★ Camper top for pre-1988 GM, SWB pickup, faded blue fiberglas, \$100. 852-0142
- ★ Pennsylvania House dining room table and 10 chairs \$2,000; two end tables \$150 each. 881-1005
- ★ Old Lionel trains 1927, 1949, 1953 outfits. Avon bottle automobiles with cologne. 880-8134
- ★ Computer parts: 386 motherboard, IBM professional graphics display, 3 1/2" floppy, etc. \$50 for all. 464-9352
- ★ Nordic Track Pro model skier. 586-4831
- ★ 486 computer with VGA monitor \$425. 776-9118
- ★ Two Alabama vs. Southern Miss. football tickets. 895-9520
- ★ Golf clubs, Lynx master 2-8, PW, new grips \$85. 350-7461
- ★ Yamaha Electone console organ, two keyboards plus pedals, auto rhythm, vibrato, bench, manuals \$350. 534-2368
- ★ VGA monitor, \$65. 776-9118
- ★ Tires, four B. F. Goodrich trail T/A, LT 30/9.5 x 15, \$50, 350-7461
- ★ Beanie Babies, Claude \$20, Inky \$10, Waddle \$10, 757-0469
- ★ Small Sears refrigerator, \$50 o.b.o.; air conditioner window unit, \$200 o.b.o.; Coleman generator, 120 volt, 18.75 amp, \$200 o.b.o. 461-0190
- ★ Two mausoleum crypts, Faith Memorial Park. 16 dual axle trailer, 5' landscape box. 771-0797
- ★ Dining table, drop leaf, seats 8, 4 chairs \$500 o.b.o.; Yamaha woods, 1,3,5, graphite shaft, left handed \$60. 881-1949
- ★ Fender Stratocaster, sunburst, hard case, Mexican made \$250. 350-7461

Vehicles

- ★ 1950 MG-TD restored including engine and transmission, leather interior \$12,000. 881-7953
- ★ 1994 Kawasaki Ninja 250EX, 1,400 miles \$2,800 o.b.o. 837-8087
- ★ 1991 Cabillac Sedan Deville, white, blue, leather, 73K miles. 852-6952
- ★ 1991 Ford Ranger XLT, V-4, 5-spd, toolbox, 86K miles \$5,995. 852-8320
- ★ 1991 Nissan Sentra, 100K miles, air, PS, PB, tape, cruise, 35mpg \$4,200. 882-1833
- ★ 1995 Nissan Maxima, all options, low miles. Ask for Alan. 882-5227
- ★ 1983 Chevrolet 20 series conversion van, 300 CID engine, AT, PS, PD, air, table bed \$3,500. 881-6040

MARSHALL STAR

Marshall Space Flight Center, Alabama 35812

The Marshall Star is Published every Wednesday by the Public Affairs Office at the George C. Marshall Space Flight Center, National Aeronautics and Space Administration. Contributions should be submitted no later than Friday noon to the Marshall Public Affairs Office (CA10), Building 4200. Submissions should be written legibly and include the originator's name. The Marshall Star does not publish commercial advertising of any kind.

Writer-Editor – Angela D. Storey Editorial Assistant – Betty Humphery Director, Media Services – David B. Drachlis Director of Public Affairs – John B. Taylor U.S. Government Printing Office 1997-532-111- 60030

Wanted

- ★ Two Auburn Florida football tickets. 852-8320
- ★ King Cobra or Callaway woods with regular shaft. Titanium driver 10.5 loft. 883-2948
- ★ Leather couch and/or loveseat, king size and full size mattress. 837-0307

Found

- ★ Car keys found in front of Building 4200, call 4-4758 to identify.
- ★ A pair of eyeglasses were left in reproduction, Building 4200, call 4-4758 to identify.

Free

★ For removal: 140' chainlink hurricane fence small gate, large gate. 881-8879

Center Announcements

- Free A chance at winning a VCR just by buying your MSFC 1997 Picnic meal tickets by Sept. 26 (open to MSFC civil service and on-site contractors, spouses, and dependents).
- Auction of Government Surplus Property A local sealed bid sale of property will be held Sept. 26 at Bldg. 7405, Warehouse Rd., Redstone Arsenal. Inspection is Sept. 23-24 from 8 a.m. to 3 p.m. Bids must be submitted by 8 a.m. to 12 noon by Sept. 25. To view material for auction or for further information call E. Couch at 842-9474 or D. Davis at 842-2570 or visit the web site at: http://www.drms.dla.mil/.
- Senior/NASA Day The EEO Office is asking for NASA and alumni volunteers from A&M and Tuskegee to assist in giving the students and general public information about MSFC roles and missions. The event is scheduled for Nov. 8 at 1:30 p.m. For additional information contact Alice Sams at 4-0374 or Willie Love at 4-0088.
- Toastmasters Redstone Toastmasters will meet every Tuesday at 6 p.m. in the Morrison's Cafeteria in Madison Square Mall.
- Mars Ballroom Dance Club The Mars Ballroom Dance Club formal fall dinner dance will be held in the VBCC West Hall on Oct. 11 and will feature music by the Paul Chambers combo. Socializing will begin at 6:30 p.m., and a buffet dinner will be served at 7 p.m., followed by dancing from 8 to 11 p.m.

 Tickets are \$18 per person with a \$3 discount for members; they can be purchased from Tamara Landers (544-6818), Pat Sage (544-

- 5427), Ed Ogozalek (837-1486), Linda Kinney (544-0563), and Bob William (544-3998). Reservation for a table of 8 can be made by calling Woody Bombara (650-0200).
- Free A chance at winning a \$50 gift certificate for volunteering 1 hour of your time at the 1997 MSFC picnic. Contact Carole at 544-2314 for more information.
- Retired Senior Volunteer Program The Huntsville/Madison County Senior Center will participate in "Make a Difference Day" on Oct. 27 from 7 a.m. to 6 p.m. at the Senior Center. Contact Darthy Barnett for more information.
- Stop Abuse Aware of waste, fraud or abuse? Telephonically contact the MSFC Office of Inspector General at 544-9188 or send complaints to Mail Stop M-DI. Confidentiality will be maintained.
- Toastmasters International Toastmasters will meet Sept. 23 at 11:30 a.m. in bldg. 4610 cafeteria conference room. All MSFC employees, contractors, and friends are invited to attend. For information call Debbie Hagar at 5-4992 or Lee Johns at 4-5142.
- American Express Cards New American Express cards will be mailed at the end of September to employees who have government-issued cards expiring in October. For information contact Tina Walker at 4-7291.
- NASA Ski Week The 7th Annual NASA Ski Week will be hosted at Whistler-Blackcomb, January 24-31. All MSFC employees, on-site contractors, retirees, and dependents are eligible to participate. For information contact Tom Dollman at 4-6568 or by e-mail "tom.dollman@msfc. nasa.gov".
- MARS Golf Club The tournament is scheduled for Sept. 27 at Deer Run in Moulton, AL. The format for the tournament will be 2-man best ball and is open to all MSFC employees and retirees. The tournament will be flighted based on handicaps and you select your own partner. For information call Phil McKinnon at 544-0597.

Job Opportunities

CPP 97-104-CP, Accountant, GS-510-7, Office of Chief Financial Officer, Accounting Operations Office. Closes September 26.

Recruiting Bulletin: MSFC 97-16, Secretary (Office Automation), GS-318-5, Duty Station: Washington, D.C., Space Transportation Programs Office, Transportation Projects Office. This is a temporary appointment not to exceed 1 year. Closes October 3.

BULK RATE Postage & Fees PAID **NASA** Permit No. G-27